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13,758

A.D 1891 Aug. 14. Nº 13,758.

MYLIUS' Complete Specification.

(1 SHEET) 1/6

Fig: 1.

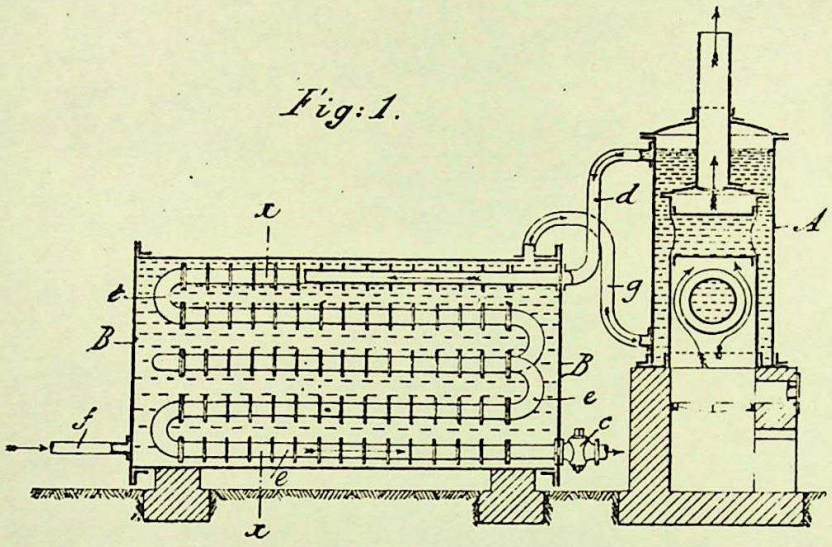


Fig: 4.

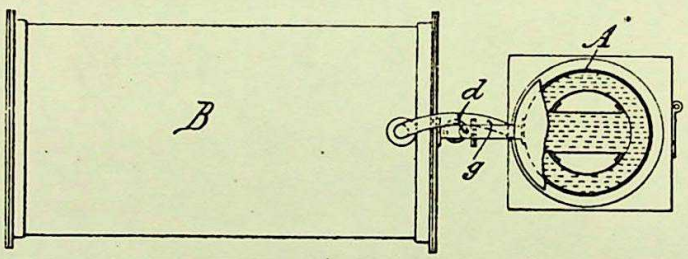


Fig: 2.

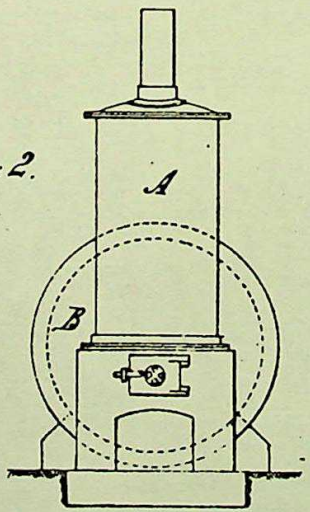
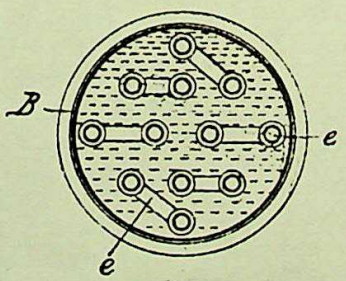


Fig: 3.



[This Drawing is a reproduction of the Original on a reduced scale.]

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N° 13,758 A.D. 1891

Date of Application, 14th Aug., 1891—Accepted, 19th Sept., 1891

COMPLETE SPECIFICATION.

Method of Sterilizing Liquids, particularly Sewage, and Apparatus appertaining thereto.

I, AUGUST MYLIUS, Dr. Med. of Berlin in the German Empire, Königgrätzerstrasse 101, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The object of the present invention is to render uninjurious those large quantities of living micro-organisms still contained in liquids which have already been subjected to the ordinary purifying processes.

In order to make my invention more clear I refer to the accompanying drawings in which similar letters denote similar parts throughout the several views:

Fig. 1 is a longitudinal section through the apparatus;
Fig. 2 is an end elevation of the same;
Fig. 3 is a cross section on line *x*—*x* Fig. 1 and
Fig. 4 is a plan of the apparatus.

In order to destroy the micro-organisms present in the sewage or waste water, the latter is driven by a pressure pump through pipe *f* into the receptacle B, where it rises and enters by means of pipe *g* the vessel A which is adapted to be heated after the manner of a steam boiler. The waste water leaves the boiler or heating vessel A at a high temperature, passing, by means of pipe *d* into the ribbed pipe system *e* whence it flows into an adjoining conduit at *c*. The waste water coming from the boiler and entering the ribbed pipe system *e* at a very high temperature, meets the waste water entering the receptacle B at *f* imparting its heat to the same and thus foreheating it and effects an advantageous consumption of fuel. At the same time all micro-organisms are destroyed through the high temperature to which the waste water is brought.

By encasing the receptacle B and boiler A in a jacket of non-conducting material the loss of heat is reduced to a minimum. The waste water flowing off through the ribbed pipe system *e*, owing to the large superficial area of the same transfers its heat to the fresh waste water entering the receptacle B and about to be heated so that only a proportionately small quantity of fresh fuel will be consumed. By thus employing the principle of currents flowing in the opposite direction, the employment of heat for destroying micro-organisms when large quantities of waste water or sewage have to be treated is rendered practicable, which was not the case up to now.

Having now particularly described and ascertained the nature of my said invention and the manner in which the same is to be performed, I declare that what I claim is:

1. The process of sterilizing liquids, particularly waste water or sewage, by causing the same after having been previously heated to a high temperature, to be led back through a tubular system with large heat radiating surface arranged in a closed receptacle B and thus to meet the fresh quantities of waste water which are led into said closed receptacle, substantially as described.

2. The combination of the closed receptacle B, having waste water inlet *f* and heat radiating system of pipes *e*, said receptacle B having outlet *g* to the boiler A and inlet *d* from the boiler to the pipe system, as also outlet *c* for the pipe system *e* substantially as described.

[*Price* 6*d.*]

3. The process and apparatus for sterilizing waste water or sewage, substantially as hereinbefore described and illustrated in the accompanying drawings.

Dated this 14th day of August 1891.

W. P. THOMPSON & BOULT,
Agents for the Applicant.

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